

# THE MOTOR AGE

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## AN ASSOCIATION TO FIGHT SELDEN PATENT

A MEETING CALLED BY THE MOTOR AGE, WITH THE ASSENT OF THE FIRMS WHO HAVE BEEN MADE DEFENDENTS, TO FORM A DEFENSIVE ORGANIZATION

Pursuant to its statement of last week, The Motor Age is able to give the information that active steps have been taken for the formation of an association of the manufacturers of gasoline motor-vehicles and the motors therefor, to fight the claims of the Electric Vehicle Co. to a monopoly in the manufacture of automobiles of this class, under the claims of the Selden patent, which it owns.

Immediately on receipt of the news that service had been obtained on the Winton Motor Carriage Co. of Cleveland

and on the Buffalo Gasolene Motor Co. of Buffalo, The Motor Age wrote to both concerns, calling their attention to the advisability of an immediate call for a meeting to form a defensive organization and offering, as a disinterested party, to call such meeting, provided the companies would agree to place their suits in the hands of attorneys selected by such association. A conference was held by the officers of the two companies and both wrote to The Motor Age saying that they would be glad to have the good offices

of this publication. On the receipt of these letters, the following communication was sent to the leading manufacturers:

#### Call for Meeting

As you are doubtless aware, the Electric Vehicle Co. has brought suit against the Winton Motor Carriage Co. of Cleveland, and the Buffalo Gasolene Motor Co. of Buffalo, to restrain them from making or selling gasolene motor-vehicles.

The Electric Vehicle Co. owns the U. S. Patent No. 549,160, to George B. Selden, which they claim covers broadly the application of explosive motors to automobiles, and the present suits are intended as the basis for driving all persons and firms out of the industry and monopolizing it to themselves. A decision against either of the parties to the present suits would be sufficient grounds for the Electric Vehicle Co. to secure injunctions against all other makers of gasolene vehicles as well as against agents and individual purchasers.

You will readily see that the suits already brought are directed against not only the Winton Motor Carriage Co. and the Buffalo Gasolene Motor Co., but against the entire gasolene motor-vehicle industry. Every firm engaged in building automobiles propelled by gasolene motors or motors intended for use in vehicles or motorcycles has a personal interest in these suits.

The Motor Age has already communicated with the Winton Motor Carriage Co. and the Buffalo Gasolene Motor Co., and both have expressed themselves as favorable to the formation of an association of makers of gasolene motors and gasolene motor-vehicles, and both have given written assurance of their willingness to place the defense of their suits in the hands of attorneys selected by such an association.

With this assurance, the Motor Age takes the liberty of requesting you to have a representative present at a preliminary meeting to form a defensive association, to be held at the Iroquois Hotel, Buffalo, N. Y., on Thursday, August 2, at 10 o'clock in the morning.

No person or firm present at this meeting will be bound in any way except as may prove agreeable to him.

We need scarcely urge upon you the importance of these suits to yourselves, or the advisability of your presence. We ask that you advise us at once that a representative of your firm will be present.

A considerable number of manufacturers have already expressed their approval of the idea of a defensive association and desire to join such.—The Motor Age, Geo. K. Barrett, Editor.

If any who are interested in the defense of the Selden suits have been omitted from the list of concerns to whom letters were addressed, it was due to oversight, and they are invited to be present at the meeting, communicating the fact to the editor of The Motor Age at 324 Dearborn Street, Chicago.

#### Review of the Situation

A brief review of the situation is in order.

George B. Selden of Rochester, N. Y., applied for a patent on a "road engine" on May 8, 1879. The patent was issued, after being in the patent office for more than sixteen years, on November 5, 1895. There were numerous interferences, but all were finally overcome. Mr. Selden is a patent attorney. Recently he disposed of his patent to the Columbia & Electric Vehicle Co., which company was then owned, in part, by the Electric Vehicle Co. Since that time the Electric Vehicle Co. has completely absorbed the Columbia concern. Notices of infringement were first issued by the Columbia company to numerous manufacturers of gasolene vehicles and later suits were brought against the Winton Motor Carriage Co. and the Buffalo Gasolene Motor Co., to restrain them from manufacturing or selling gasolene vehicles and to collect damages on account of those already made.

#### Service Obtained in New York

Service was obtained on the Winton company at its branch offices in New York, and on the Buffalo company at Buffalo. The laws of the state of New York are notoriously favorable to patent litigation of this character—from the standpoint of the plaintiffs—which, doubtless, accounts for the two suits being brought in this same state.

The strongest of the six claims of the Selden patent is the first, which reads as follows:

#### Selden Claim

The combination with a road locomotive, provided with suitable running gear including the propelling wheel and steering mechanism, of a liquid hydrocarbon gas-engine of the compression type, comprising one or more power cylinders, a suitable liquid fuel receptacle, a power shaft connected with and arranged to

run faster than the propelling wheel, an intermediate clutch or disconnecting device and a suitable carriage body adapted to the conveyance of persons and goods, substantially as described.

#### Basis for Injunctions

The present status of the case is as follows: Only two companies have been sued and it may be that no further suits will be brought until these two are settled. If they should be decided in favor of the complainants, the Electric Vehicle Co., they would afford a basis for obtaining injunctions against all other manufacturers, preventing them from making gasoline vehicles, and grounds for collecting damages from all manufacturers, agents and users of such vehicles. In this latter fact lies the danger to the entire industry, and the reason that all manufacturers of both vehicles and the motors therefor should combine in fighting the suits.

#### Necessity of an Association

Both the Winton and the Buffalo companies have taken a commendable stand in the matter, preferring to fight the patent on its merits. In the event of the failure of other manufacturers to join in the defense of the suits, the Winton and Buffalo companies would be wholly justified in allowing their suits to go by default—first being assured of a license to manufacture under a small royalty, which they could doubtless secure—and leave the other makers in a far more disagreeable position than the one in which the defendants themselves are to-day. For these reasons, it is hoped that all will join the proposed defensive association.

#### Duryea Power Co.'s Stand

When it first became known that action was threatened under the Selden pat-

ent the Duryea Power Co. of Reading, Pa., realizing the importance of the matter to the industry, communicated with a number of other manufacturers with a view to the formation of an association on the lines advocated by The Motor Age. Immediately on learning that the Winton company had been sued, President Sternbergh of the Duryea company wrote offering to call a meeting, but had been anticipated by The Motor Age. To each of the firms with whom he had been in communication, Mr. Sternbergh wrote thusly:

#### Urges All to Attend

We have to-day received a telegram from the Winton Motor Carriage Co., as follows:

"The Motor Age has called meeting for August 2, at Buffalo."

We believe that The Motor Age will notify all concerned of this meeting and trust that there will be a full representation. It is a matter of congratulation that this matter is to be taken up vigorously and will receive prompt and efficient treatment.

#### Copies of the Patent

Volume II, No. 14, of The Motor Age contained the first news of the Selden patent litigation, together with the complete specification, drawings and claims of the patent. Numbers 15 and 19 contained further information. These numbers can still be obtained by those interested.

#### CHAMBERLIN NOT RETAINED

New York, July 24.—George F. Chamberlin says that the statement published in The Motor Age to the effect that his firm has been retained as counsel for the Winton Motor Carriage Co. is erroneous and that he does not yet know who has been chosen for the defense.

## THE INTER OCEAN TOURNAMENT

The management of the Chicago Inter Ocean has taken exception to the publication in The Motor Age of the rumors that were afloat that the automobile tournament being promoted by the daily

was in the interest of any one manufacturer. W. D. Bowles, business manager of the Inter Ocean, has given every assurance that the tournament is being promoted solely for the advertising which

his paper expects to receive from it and for the good of the industry.

He explains the statement which emanated from the Inter Ocean office, to the effect that the paper was guaranteed against loss, in this manner: Before he made any public announcement of the tournament, a number of western makers were visited and solicited to take space for exhibition purposes, on the guarantee that if the gate receipts of the tournament were sufficient to pay the running expenses, the money paid for rental of the spaces would be rebated. In this manner, according to the Inter Ocean representative, enough manufacturers were induced to take space to guarantee receipts enough to pay the running expenses, which, it is expected, will be in the neighborhood of \$12,000.

One of the representatives of the Inter Ocean called at The Motor Age office, and, in the course of his conversation, made the statement that there would be no rental exacted for the use of the grounds by the Washington Park Club; that the Inter Ocean purposed to put up the \$10,000 to be given in prizes, not counting it as a part of the expenses of the tournament; that no rental would be exacted from any exhibitors beyond what was necessary to pay the expenses of advertising and running the tournament, provided the gate money should not cover such expenses; that already a sufficient number of manufacturers had contracted for exhibition spaces to guarantee such running expenses and the success of the tournament; that, among others, spaces had been taken by the Woods Motor Vehicle Co., the Chicago Motor Vehicle Co., the Hewitt-Lindstrom Motor Co., and the Winton Motor Carriage Co.; that the tournament would be largely advertised both in Chicago and the surrounding territory; that arrangements had been made whereby rival Chicago papers would give the tournament fair treatment and publicity; that reduced railroad rates would be secured; that the officials of the Automobile Club of America had given assurances of the active co-operation of their club; and that facilities for charging and repairing of vehicles would be installed at the

Washington Park Club grounds for the free use of exhibitors and participants in the various races and contests.

He added that the programme would be revised and that experts would be called upon to act as judges and other officials.

The Motor Age has been unable to find any definite source for the rumors that the tournament is to be run in the interest of any one concern and believes that such rumors are unfounded.

In an attempt to locate the rumors, Mr. Donaldson of the Chicago Motor Vehicle Co., was, among others, interviewed. He said:

"If the Inter Ocean Automobile exhibition is being promoted to boost mainly the interests of one particular manufacturer, the scheme has been kept well under cover. I have not heard anything about it."

Mr. Donaldson continued:

"The rumor that I am a member of the programme committee for the Inter Ocean show is unfounded. Our company has nothing more to do with the exhibit than that we have contracted for space to show our machine. I know absolutely nothing concerning the rumor that a certain large manufacturer is backing the Inter Ocean in the enterprise.

"When our company applied for space at the show the Inter Ocean stated that our patronage had not been solicited because it was thought that all of our work was merely experimental and that we had nothing to exhibit. We told the managers of the show that it was true we were still in the experimental stage and had no large number of machines to show, but that we desired a small space in which to present our work as it stood, and that we desired at least to be at the show in order to meet other people in the industry and get acquainted with the trade. An allotment of space concluded our dealings with the Inter Ocean.

"So you see I have no way of knowing whether or not the exhibit is to be run as a one-man affair under pretense of being an open show.

"I hardly think Mr. Woods is engineering the deal. Having withdrawn from



the Woods Motor Vehicle Co., he would not be working in its interests, and the new company that he is organizing is not yet sufficiently under way to enter into any such affair. If it is really true that one exhibitor is behind the whole show I would say, at a guess, that it is more likely the Locomobile company than the Woods.

(The Motor Age is in receipt of a letter from the Locomobile company asking for definite information regarding the firms that have already taken space, etc., without which, they say, they will not agree to participate.—Ed.)

"Probably the rumor that I am on the programme committee emanated from the fact that Mr. Porter of the Autobain came to me one day for information concerning the arrangement of exhibit spaces and similar details in the management of a show. I told him that I knew but little about such things and referred him to Mr. Linville, who has managed fairs and shows for about thirty years and is thus conversant with the subject. Individually I am little concerned in the matter.

"I sustain grave doubts, however, as to the value of such a show from a practical standpoint. It is, of course, a good thing for the trade to get together, but the competitive element which comprises a part of the proposed Washington Park show is likely to mislead the public. There are many vehicles whose natty appearance, light construction and easy handling under ideal conditions will create a prejudice against other more practical machines for all around use.

"The automobile industry will never

succeed on the strength of machines which can whirl prettily around one of the best race tracks in the country. The American public is looking for vehicles which may be used everywhere, under all conditions. Upon such rests the eventual prosperity of the game. In my opinion, rougher tests than the competitions scheduled for the Inter Ocean automobile show are necessary for truthful and valuable comparison. I know of too many motor vehicles which refuse to stay sold to be in favor of cultivating the tendency of some makers to sacrifice strength and safety for light weight.

"Toy machines are all right for some purposes. Substantial vehicles which will stand all kinds of abuse are the best basis for future business. Because of that belief I am not worrying because we are not yet ready for the market. I want our machines to be entirely practical before we begin sending them out. We are putting enough material in our machines and doing enough good mechanical work to allow for all practical contingencies in use. As I said before, no toy machines for me.

"High speeds and rough handling, bad road surfaces and inclement weather must be combated by the automobile builder, and the only way to fight such conditions is with good workmanship and the right amount of material in the right place. Many makers have the principle of the thing correct, but do not build their machines well. Hence the vehicles are constantly coming back to the shops.

"Regarding the Inter Ocean show I cannot say anything more, as I have told you all I know about it."

## TEST TRIP OF AUTOMOBILE WAR CARRIAGE

On Thursday last, Maj. R. P. Davidson of the Northwestern Military Academy left Highland Park, Ill., about twenty-five miles north of Chicago, in company with four of the students of the academy, on the military automobile of which

much has been said in the daily papers of the country. Writing to The Motor Age, Major Davidson says:

We leave Fort Sheridan Thursday, the 19th, with a message from Major-General Joseph Wheeler to Lieutenant-General

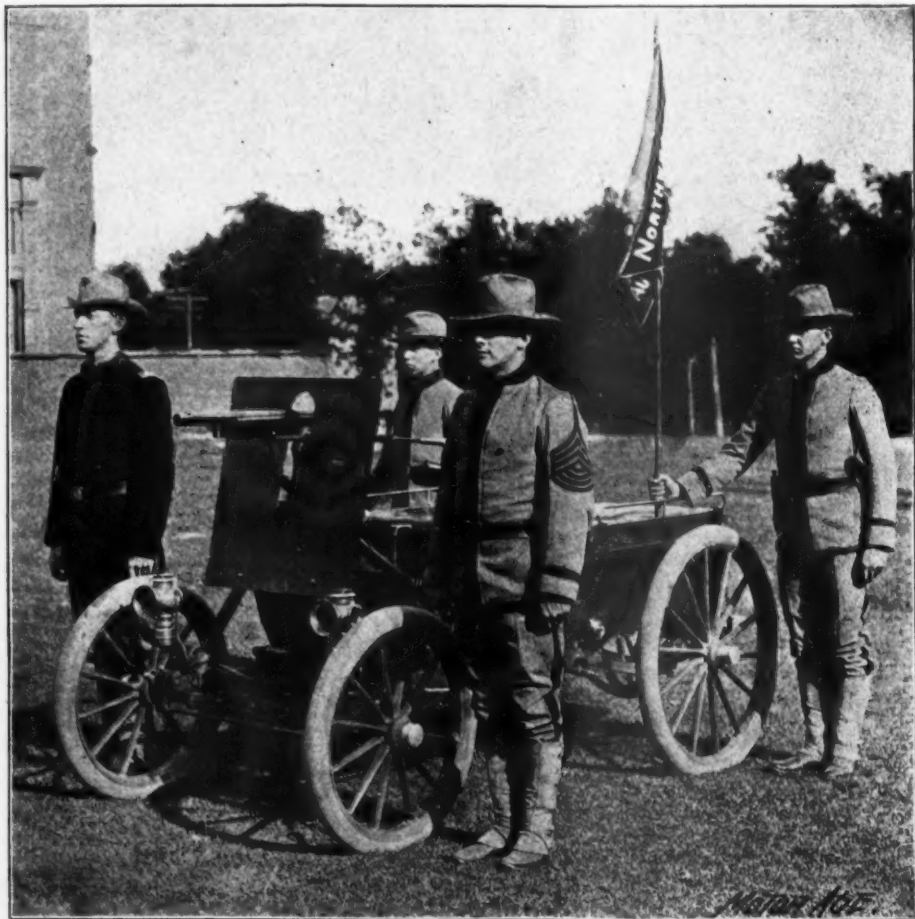
Nelson A. Miles, Washington, D. C. Our road leads through Chicago, Toledo, Cleveland, Buffalo, New York City, Philadelphia, to Washington.

We are not endeavoring to make any speed records any more than that we will travel as fast as consistent. The experiment is more of a test to find out how much the automobile will stand in the way of heavy load and hard usage. The

The carriage weighs, with gun and equipment, 1,600 pounds. With a corps of four, about 2,300. We camp and do our own cooking en route.

Highland Park, Ill., July 17th, 1900.

The accompanying illustration is from a recent photograph of the vehicle. In addition to carrying the gun and passengers shown in the illustration, the



matter of speed is merely a question of gear and how much risk the driver will run, both personally and as to teams. While having a legal right to half of the road, we feel that there is a moral obligation due to drivers and horses and, while we find it makes a great difference with the number of miles traveled in a day to stop more or less for carriages, we prefer to do it rather than have serious runaways.

vehicle is also made to convey a tent and a miscellaneous assortment of camp utensils.

The trip started auspiciously, but, soon after passing Chicago, one of the tires of the vehicle met with an unrepairable accident and the trip was brought to an untimely stop, pending the receipt of a new tire from the factory.

## THROUGH AUSTRALIA BY MOTOR

ACCOUNT OF A 500-MILE TRIP IN AN AUSTRALIAN-MADE STEAM VEHICLE OVER UNMADE ROADS AND THROUGH THE BUSH

(CONCLUDED.)

Our run into the precincts of Juneec Junction was good, but we got "fogged," mistaking the road and running right into the apex of the junction, necessitating a run back of half a mile. Too early for dinner, we got a bag of sandwiches, little thinking then the value we would get out of them. We proceeded and had not covered more than two miles when an incident occurred which might have put a full stop to our trip. It happened in this wise: The sandy soil had dropped in patches into ruts up to two feet deep, and in trying to dodge one of these, Thomson unknowingly came too close to the fence on my side, the left front wheel hub struck a post, which slewed the car right into the fence post and five wires. The wires served as buffers and held the car, but, unfortunately for the tire on the "struck" wheel, the wires also held it, tearing two large gashes right through the rubber, without penetrating the canvas. The shock to the hub of the wheel twisted and bent up the struts and steering rods, but we lost no time in removing the bent material and hammering it straight, nothing being fractured.

### An Excellent Run

We reached Wagga at 2:10 p. m., causing an immense sensation in the town, which was the busiest we had so far passed. Our run had been the best so far, the car having reeled off 44¾ miles in four hours and twenty-eight minutes, the roads being unmade and not particularly good. We made a splendid dinner here, and, instinctively retaining our uneaten sandwiches, we set off at 3:15 for Cookardinia (thirty-five miles) as we were informed that there was a good metal road right through. Our informant may have told us in good faith, but had we met him at 7 p. m. I think we would have gotten into trouble for "assault and inflicting grievous bodily harm." The roads were tip top for nearly twenty miles, and

then, just as twilight began to fall, the condition of the roads fell and from a nice metal road we had the option of several tracks through the bush, taking the one most worn.

### In Serious Trouble

Our troubles then began in earnest for it darkens quickly among the hills and trees, and by 6 o'clock it was pitch dark. Lighting our four lamps (two kerosene and two acetylene), we plodded wearily along, making the best of it, until we came to a chain of swamps. After sticking in one or two holes we struck a dryer track, but found that a heavily laden bullock wagon had lately passed over it, sinking in places over a foot. In fact, we came to several spots where the wheels had been dug out. However, we kept moving ahead, sometimes leaving the car and exploring, until at last mistaking a sheet of water for good level ground, we stuck firmly up to our front axles in the mud.

### Stranded in the Dark

This was about 7 p. m., and I "moved" that the car stay where it was till day-break, we in the meantime camping in our coats and one rug. Thomson seconded my motion, which was declared unanimously carried, when, presently, we heard dogs barking and a man came upon the scene, having come from a drovers' camp half a mile away, after seeing our lights. So, with the prospect of company for the night we reconsidered our motion and set to work, over our boots in water, eventually succeeding in dislodging the car from where it had stuck. We were, of course, covered with mud and perspiration. To reach the drovers' camp we had to pass a flock of 13,000 sheep in a lane (nice work in the dark). The sheep were scared, many of them butting the car, one getting under it. We managed, nevertheless, to force a passage and met with a hearty greeting from eight drovers, who

were in charge of the sheep. They kindly made us some tea, but having run short of "tucker" we were compelled to fall back upon our uneaten "June" sandwiches. After we had talked over the fire till 9, they lent us a few bags and rugs to camp with under one of the carts. It took us some time to accustom ourselves to the hard ground after having been used to nice warm beds. Even the thought of it is enough to keep one awake. However, we were soon asleep, being pretty tired.

#### Stiff with the Cold

But early in the morning—cold? Why, ordinary cold is boiling hot compared to our temperature. When we moved, our joints almost cracked with the cold. The big fire soon brought life into us again, and, after making a third meal of our "June" sandwiches (lunch, tea and breakfast), finishing up with some "damper and mutton" which the drovers had left after breakfast, we made a start at 7:50 for Cookardinia, which we reached at 9:22 a. m., after having some difficulty to get good water, there being no houses or dams on the way. We managed to obtain a small supply by straining it through a handkerchief, but got through all serene, and we made Germanton at 11:17 a. m.

#### Vehicle Hidden By Mud

After lunching at Woomargama (nine miles from Germanton) we entered upon our last stretch of New South Wales road, arriving at the Border Town (Albury) at 5 p. m. exactly, the 37¼ miles from Germanton occupying three hours and fifty-two minutes. We had now covered 296 miles of our journey, and were in tip-top health, but the car was hardly recognizable for mud and slush. Nevertheless, being in grand working order. The following morning saw our entry into Victoria, crossing the Murray River about 11 a. m., and, after the usual customs formalities we passed Wodonga, the Victorian border town, at 11:13.

#### More Bad Roads

The roads to Barnawatha were fair and level, but from here to Chiltern were every bit as bad as any New South Wales roads, being unmade and cut up terribly

with the rain ruts. Arriving at Chiltern at 1:50, we had dinner, leaving at 2:45. The roads to Springhurst (ten miles) were fair, after the first four miles, one very dangerous gutter having to be negotiated, but the going then became very good. Striking the metal road just after Springhurst, we reeled off 15½ miles in 1:23, arriving at Wangaratta at 5:40, just in time for tea. After a good night's rest—so good in fact that we did not waken till 8 o'clock—we resumed our now interesting journey, leaving Wangaratta at 9:10 a. m. The road from here to Glenrowan was macadamized, but awfully rough in places, the cobbles having worn to the surface.

From Glenrowan to Winton the going was rough, the famous "glue-pot" having to be negotiated. This "glue-pot" is about half a mile long, and it is usually up to the axles in sticky mud, but we made light of it after the "roughing" in New South Wales, and passed through Winton at 12:01. Our run into Benalla was good, reaching there just in time for dinner (12:47).

#### A Broken Belt

Tanks full, boiler full and drivers full, we were all in harmony; the car now well down to the hard work, sped merrily on its way home, and was passing through Baggadinnie (seven miles) in full sail at 2:23, and Violet Town (fifteen miles) at 3:22, the pace being splendid, notwithstanding the sandy nature of the roads, and the numerous cross gutters that had to be crossed. Everything went well until about six miles from Euroa, when the car encountered a heavy patch of sand, breaking the belt at the eye-holes. Ten minutes put the matter right. We quickly made up for lost time, the roads—even if a bit rough—being level and straight and we entered Euroa at 4:45, our mileage reading 395½—the figures by this time being quite interesting. The roads continuing unmade for the greater part, and very patchy, we decided to stay at Longwood, more especially as we remembered our first and only experience of night traveling (Wagga to Cookardinia). Our run from Euroa to Longwood (10¼ miles) was done in 57 minutes.

Having only eighty-six miles in front



of us, hope beat high in our hearts, as with a fair road and good weather we fully made up our minds to reach the metropolis in the evening, but we had not got fairly started on our way when the rain began to descend in torrents. As the road from Longwood to Seymour (twenty-seven miles) is unmade, and the ground soil is alternate clay and sand, it can well be imagined what the running became like. Notwithstanding the inclemency of the weather and roads, we still had hopes of reaching Melbourne at nightfall, and we passed through Burnt Creek at 9:25, Avenel at 10:12 and Nangalore at 11, reaching Seymour after almost circling the town at 11:45. The rain did not seem to impede the progress of the car to any marked extent, although the belt got wet and greasy, causing it to slip slightly when working heavily. It was a miserable day, raining all the time, and the mud splashing everything on board, but signs of clearing up cheered us greatly after leaving Seymour.

The road to Tallarook was good, being composed mainly of ironstone gravel, but one heavy pinch paved with stone blocks gave the car all it could do. Reaching Tallarook at 1:23, we now lost all hope of arriving at Melbourne at 4, as thirty-five miles lay between us and our destination, so we postponed our prospective arrival till between 6 and 7, and had dinner, afterwards filling up tanks and leaving at 2:08.

#### More Breakage

We now entered upon a splendid stretch of metaled roads nicely undulating to Broadford, which we passed through at 3 o'clock. From here to Kilmore the rises became more pronounced and the belt being soaked by the continuous rain of the morning, made their ascent very hard work for the motor. Climbing one of these stiff pinches the belt snapped for the second time at the hook holes. Six minutes put it right and we made fair time to Kilmore, reaching that township at 4:20. While passing through the township our second breakage to the car took place, which strange to say was the mate to our first, viz., the chain adjustment strut clip, rather a long term. But to explain matters fully, it is a piece of "L"

iron, about one-quarter inch by one-quarter inch, and fitted with two small holes in the long arm by which it is fastened to the back axle, and one larger hole in the short arm through which passes the screwed end of the adjusting strut being locked with nuts at each side. An enormous strain is thrown on this small piece of iron with the pull on the chains and the up and down motion of the back axle. By a piece of luck, when getting a new one at Young for our first breakage, we got a spare one made, and the delay in fitting was not more than twenty minutes and time was now valuable.

#### A Glorious Coast

We got going again as soon as possible, and covered everything up to "Pretty Sally" Hill, climbing the slopes in good style. Over the top we cut off the motor in the prospect of a good coast, and away we went like the wind. The motion of flying down at fully forty miles an hour was certainly exciting. One cannot imagine the tremendous excitement and pleasure of going at the terrific pace over the roads, with the car, seemingly alive, under us.

It was glorious.

It was sublime—till, with a series of rapidly decreasing hisses and increasing bumpings on the road, we realized that our back tire had punctured after carrying us over 470 miles of terrible country. The powerful band brakes soon reduced our pace to a crawl, and we continued our "coast" at about eight miles an hour.

#### Delayed By a Storm

After a delay of about half an hour at Wallan, examining the tire and lighting our lamps, we journeyed slowly to Beveridge, arriving at 6 p. m., just in time to avoid the heavy storm that broke over the place. We had tea and the weather keeping up to its best storm standard, we regretfully decided to postpone our arrival in Melbourne till the next day, timing ourselves for 12 noon. On starting at 8:50 a. m. we found the rain and wind beating bitterly cold right into our faces. Our morning's run was quite devoid of any interest further than we were nearing good old Melbourne, and that we were being slowly frozen. Thomson swears

that he will devise a way of heating the car in winter by a series of steam pipes, and, after the way he has come through the trip, it seems that anything he says he will do, it will be done. That will be a feature of the future, however.

#### Reach the Destination

But pardon my digression from the journey, which we carried through to time-table, passing through Coburg at 11:38 a. m. At Brunswick tram terminus we found Messrs. K. E. Edge, F. L. Mount, G. F. Wilson (directors of the Thomson Motor Car Syndicate, under whose auspices and direction the trip was under-

taken), and a number of friends, etc. After a brief welcome we continued our drive to the city, stopping at the "Australian Cyclist" to be photographed, and arriving at the G. P. O. at 12:23, after having covered the longest Australian motor car journey (Bathurst, N. S. W., to Melbourne), 493½ miles, net, our actual riding time being 56 hours and 36 minutes.

The consumption of ordinary kerosene on the whole journey was only .082 gallons per mile, and the weight of car, luggage, tools, Thomson and I, about 1,600 pounds.

## A SEVERE TEST FOR STEEL RIMS

AN UNPROTECTED CLINCHER RIM MADE BY THE WILMOT & HOBBS MFG. CO. GIVEN A HEARTBREAKING TEST WITH SATISFACTORY RESULTS.

The Wilmot & Hobbs Mfg. Co., of Bridgeport, Conn., who manufacture the well known brass lined clincher tubing, that has found favor among many of the best of both bicycle and motor-vehicle builders, are also makers of steel rims for automobile wheels. These rims have proved as satisfactory as the tubing. Recently the company had one of their rims fitted to a wheel and tested in a manner that would show how great shocks it was capable of withstanding, under the supervision of a mechanical expert, R. T. Lewis.

#### Manner of Testing

The twenty-four-inch rim, according to Mr. Lewis' report, was used in a tangent, wire-spoked wheel which was placed in a testing machine and run for 3 1-3 hours, at a speed of 126 revolutions per minute, against a fourteen-inch wooden roller, across the face of which were nailed strips of hard wood more than an inch thick and sufficiently far apart, so that the rim dropped back on the roll after passing each strip of hard wood. The roll was carried on the end of a six-to-one lever, and the pressure between rim and roller was as high as 400 pounds. There

was no tire or other substance between the rim and roller to break the force of the constantly recurring shocks. This test in no wise affected the rim, either to show signs of giving way at the joint where it was riveted or to distort the general shape. The idea of this test was to ascertain the strength of the rim under constantly repeated shocks.

#### A More Severe Test

Following this, was a more severe test, with the same rim. The six-to-one lever and a box at the end, to hold the weight, scaled twenty-five pounds. Into this box was placed a piece of spelter, weighing fifty-six pounds. The wheel was again run at 126 revolutions per minute. Speaking of this test, Mr. Lewis writes:

The fifty-nine pounds of tin which was in the box on the end of the lever was flung nearly out of the box at times, the whole weight of this lever with the fifty-six pound slab of tin and the box in which it was contained, falling through twelve or eighteen inches came directly against the revolving rim. This was a very severe test, but this did not upset the rim entirely.

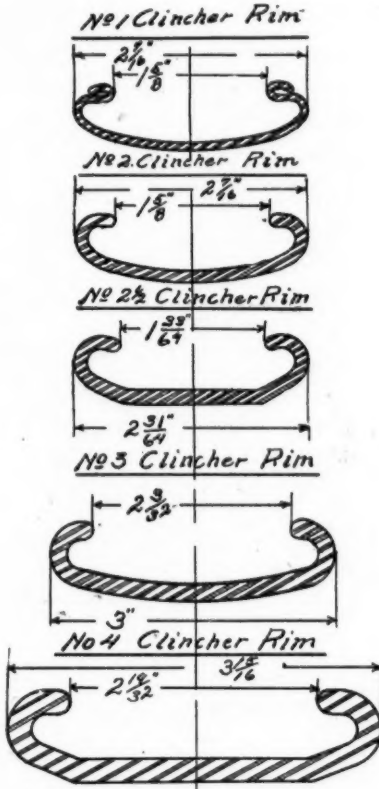
#### The Final Trial

I then took a piece of scrap and flung it in between the roll and the rim and in

this way succeeded in breaking one of the spokes. This spoke happened to break at the joint of the rim, as the piece which I flung in happened to strike directly over the joint, and one spoke on the opposite side of the rim also gave way at this time. This, of course, weakened the wheel considerably, but for nearly an hour this wheel ran at 126 revolutions

machine it was still spinning around under this treatment and did not fall entirely to pieces. If the spokes had held out I see no reason why the rim would not have held out, as nothing which we could bring against it either altered the shape of the rim itself or affected the joint until one or two of the spokes had given away. The test was terribly severe,

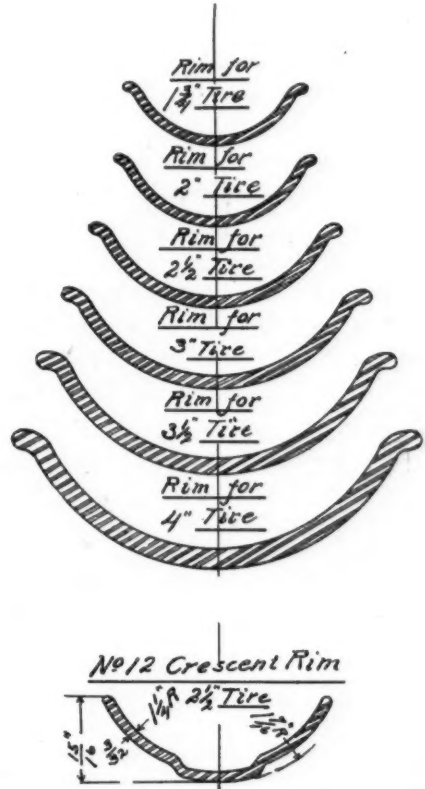
### Clincher Rims



per minute with the roll pounding it unmercifully and fifty-six pounds of tin on the end of the lever thrashing against the rim. After about half an hour of this severe treatment two of the rivets in the clincher rim showed signs of loosening but it was about an hour before the rim finally gave away, and only then after several more spokes had broken, and all of them were loose, and not giving the rim much support.

At the time the rim was taken from the

### Crescent Rims



and I can think of no strain, which the wheel of an automobile would receive which would be as severe unless it was run up against the curbing and got a very severe strain on the rim, which, of course, would tend to buckle the rim or loosen the spokes.

The accompanying illustrations show some of the various styles of rims that are being manufactured by the Wilmot & Hobbs company.

## A NEW MOTOR-VEHICLE

A GASOLENE AUTOMOBILE DESIGNED AND BUILT BY W. S. ROGERS OF THE BALL BEARING CO.—UNIQUE IN MANY PARTICULARS.

The representative of The Motor Age had the pleasure of a very interesting ride in the motor carriage illustrated in this issue by the half tone of the carriage itself and the other showing a young lady

inch wheel base, with twenty-eight-inch wood wheels fitted with Diamond pneumatic tires and equipped with the Ball Bearing Co.'s well known steering axles and roller bearings which, by the way,



W. S. ROGERS' GASOLENE VEHICLE.

and a baby just starting out for a ride. The carriage is named after the baby and is just as lively.

This carriage has been designed and built by W. S. Rogers, the general manager of the Ball Bearing Co., of Boston, Mass., and possesses many new and valuable features not heretofore developed in automobile construction as might have been expected from a man of long experience in machine design and manufacturing, who is a member of the American Society of Mechanical Engineers and has a record of never having failed in anything he ever undertook.

This vehicle is of the runabout type, of forty-two-inch gauge and forty-eight-

have not been oiled or cleaned for eight months.

The front axle and steering arrangement is of the usual type, the guiding handle being held by the right hand as shown in the picture.

The rear or driving axle is of two-inch tool steel, extending without break or division through both wheels which are perfectly loose upon it. The motive power is a three-horse-power gasoline engine geared direct to the axle through the transmission gear which is on the axle and the entire operation and action of the carriage forward, backward, fast, slow and brake is controlled by the lever shown on the side of the carriage with its



handle just above the seat and operated by the driver's left hand. The gasoline mixer is always in connection between the oil tank and the engine, ready for service by throwing in the electric switch.

Giving the crank one turn puts the engine in operation, the transmission running, but axle and wheels at rest. Pushing the operating handle forward from the central, or negative point locks

the lever is placed centrally and instantly the wheels are released from the axle. Thus it will be seen that the driver has but two things to attend to in operating the carriage and these are the steering lever and the operating lever which controls forward, backward and brake.

The total weight of the carriage is about 800 pounds without its passengers; the gasoline tank, carrying five gallons,



ROGERS' VEHICLE WITH PASSENGERS.

the motor, transmission gear, axle and wheels together and the carriage starts, without shock or jar. As the lever is pushed to its maximum travel the carriage attains its greatest speed which is about sixteen miles per hour. To stop the carriage the lever is pulled to its backing up position and the machine is brought to rest, then the lever is pushed to its central position. If the lever be held in the backing up position after making the stop the carriage will begin running backward until a speed of about four miles per hour is obtained. To back up the vehicle when standing the lever is simply pulled backward. When coasting

is in the dash and the sparking coil and battery are under the seat.

The mechanism is fully protected by patents granted as mechanical movements which account for their not being known in the automobile world before; the rights for their use upon machine tools, elevators and other lines of machinery have been sold to companies engaged in their manufacture, their use in the motor-vehicle industry having been retained by Mr. Rogers who prides himself on the fact that his carriage with its driving mechanism in no way clashes with the much talked of Selden patent owned by the Electric Vehicle Co., but is

much simpler and thoroughly practical, as anyone riding in his carriage will readily admit.

Plans are under way for the forming of a company to manufacture these carriages in different designs and those acquainted with the wondrous growth of the Ball Bearing Co. during the past two years,

from an infant business to leadership among industries of its kind throughout the world, under the management and direction of W. S. Rogers, predict nothing but profits to the investors and pleasure to the purchasers of these carriages. Details of the mechanism will be given by The Motor Age later on.

## MARSH BROS.' MOTOCYCLE

DESCRIPTION BY THE MANUFACTURERS OF A LIGHT MOTOCYCLE AND THE PERFORMANCES THROUGH WHICH IT HAS BEEN PUT.

Editor The Motor Age:—

Thinking that perhaps it might be of interest to you, and to your readers, should you choose to publish it, we take the liberty of sending you some photographs and a description of our new motorcycle, which we have had on the road since June 10, during which time it has been run over 1,000 miles, and has proved itself to be exceedingly reliable, under all conditions, never refusing to go as long as there is fuel in the tank.

### Weight Only Sixty Pounds

The machine weighs sixty pounds when ready for the road and is fitted with a coaster brake hub, which has the releasing gear and brake on the right hand side and the thirty-two-tooth sprocket, to which the motor is connected, on the left.

The cylindrical box seen on the front of the frame contains the spark coil, while the tube on the top part of the frame contains the batteries, which are composed of four cells 1 1-16 by 1 7-8 long, placed lengthwise in the tube.

### Seat-Mast for Exhaust Tube

The fuel tank, which holds a quart, is securely fastened to the back of the seat post by a suitable lug, as may be seen in the picture. Directly below the fuel tank on the right hand side may be seen the carbureter, which is fastened to the seat mast tube by a suitable brace. On the seat mast tube between the motor base

and the rear wheel may be seen the muffler, which is two inches in diameter by seven inches long. The fixture to be seen just back of the motor cylinder on the left hand side is an air scoop to carry warm air from the motor to the carbureter. The seat mast to which the motor is fastened and which acts as exhaust pipe between the motor and the muffler is made of ten-gauge tubing while all other parts are made of sixteen-gauge, which insures strength and freedom from breakage.

### Adjustment of Chains

The motor chain is adjusted by moving the rear wheel back in the parallel jaws in which it hangs, when the pedal chain is adjusted by a specially designed eccentric crank hanger.

The motor, which is of the Autocycle air-cooled type, is 1 7-8-inch bore by 2 1-4-inch stroke.

The crank case is one inch in diameter outside and contains a pair of six-inch balances 3/4-inch wide.

### Location of Motor

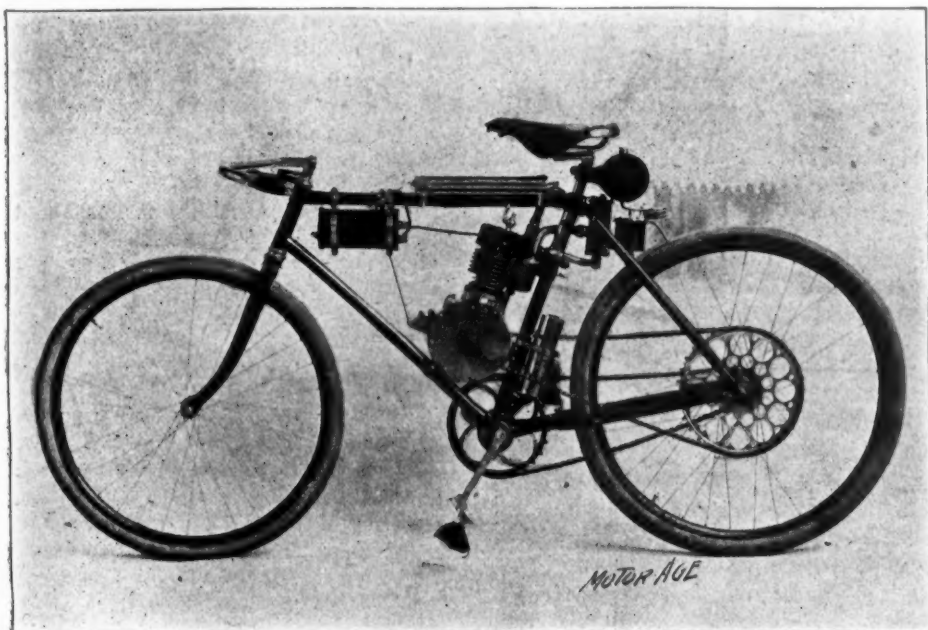
After considerable experience with the motor on the front forks and also braced up over the rear wheel behind the saddle we are thoroughly convinced the only practical place for it is in the frame just over the crank hanger. The great trouble that motorcycle designers have experienced has been to get the motor narrow enough to go between the

cranks of a bicycle without having to make the tread of an ungainly width and still have strength and a reasonable amount of wearing surface.

We have finally overcome this difficulty by making our crank pin, which is 11-16-inches long, project over the ends of the main bearings. The main bearings are only  $\frac{3}{4}$  of an inch apart, which allows ample room for the two steel discs and the connecting rod to pass through and permits a bearing 1 1-4-inches long on the sprocket side and one-inch long on the

he left Brockton, until he started back from Plymouth was one hour and thirty-two minutes, while he made the return trip in sixty-three minutes without using his feet except on the big hill in Kingston, which is one-third of a mile long and very steep.

The motor is geared so that it revolves 6 2-3 times to one turn of the rear wheel and will carry a person of average weight from twenty to twenty-five miles an hour without any help from the feet except going up some of the very steepest hills,



MARSH BROS. MOTOCYCLE.

exhaust side, the motor being only four inches wide over all. The bicycle has to have only a five-inch tread, which is the width of many of the standard wheels today. After having run the motor nearly 1,000 miles, we removed the side of the crank case and examined the bearings, finding not the slightest trace of wear and from every appearance the motor will wear eight or ten years.

#### A Speedy Trip

July 2, W. T. Marsh rode the machine to Plymouth and back, a distance of twenty-five miles each way, in two hours and thirty-five minutes. From the time

when a little help from the feet will carry one up at top speed.

#### Not a Racing Machine

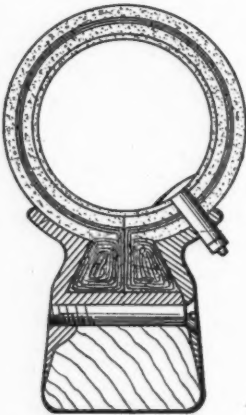
From the size of the motor it can be easily seen that the machine is not built for racing purposes, and from our experience we would consider it extremely dangerous to make the motor any larger for the use of the public as it would surely result in some very serious accidents.

We shall confine our entire attention in the future to the manufacture of these machines. We will sell the motor or any part of it, or any fixture, separately.—Marsh Bros. Brockton, Mass., July 21.

## WEEKLY PATENT OFFICE BUDGET

SEVERAL PATENTS EMBODYING NOVEL IDEAS WITH BUT LITTLE OF PRACTICAL MERIT—THE SUBJECT OF DRIVING AND STEERING BY MEANS OF ALL FOUR WHEELS AGAIN ADVANCED

This week's patent office budget offers nothing which threatens to revolutionize the motor-vehicle industry, although there are several novel ideas shown.



McCaslin's Vehicle Tire.

In the patent of the Englishman, Robert F. Hall, is clumsily embodied the general idea of driving and steering by all four wheels, which persistently comes to the surface. It is apparent that a vehicle has a greater amount of traction when driven through all four wheels. It naturally follows that, other things being equal, the vehicle embodying this principle will be more economical of power, and at the same time will be less liable to side slipping. Other things, however, cannot be equal, as there is bound to be loss of power in the necessary transmission mechanism, and necessitates the presence of more mechanism. There are, also, certain advantages—theoretically, at least—in steering by all four wheels. Whether or not these advantages are of enough practical advantage to compensate for the added cost and complication in construction, remains to be ascertained.

Light should be obtained on these two

structural topics, anent which The Motor Age will have something to say in a future number.

The complete specifications of any patents, with the drawings, will be furnished by the patent office at Washington for five cents. Persons sending for patents should address their letters "Commissioner of Patents, Washington, D. C.," should enclose five cents for each copy desired, and should give the number and date of the patent. The number is that noted at the beginning of the description of each patent in The Motor Age, and the date is nine days earlier than the date of the paper in which the description appears.

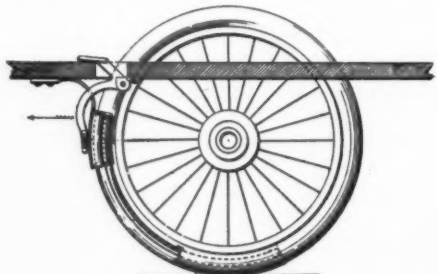
### McCASLIN'S TIRE

Letters Patent No. 654101, dated July 17, 1900, to Elton W. McCaslin, Chicago, Ill., assignor to the Morgan & Wright Co., same place; pneumatic vehicle tire; one claim allowed.

The accompanying illustration shows the construction of the tire so clearly that no further description is necessary.

### ELDER'S BRAKING DEVICE

Letters Patent No. 653951, dated July



Elder's Braking Device.

17, 1900, to David D. Elder, Philadelphia, Pa.; vehicle brake; six claims allowed.

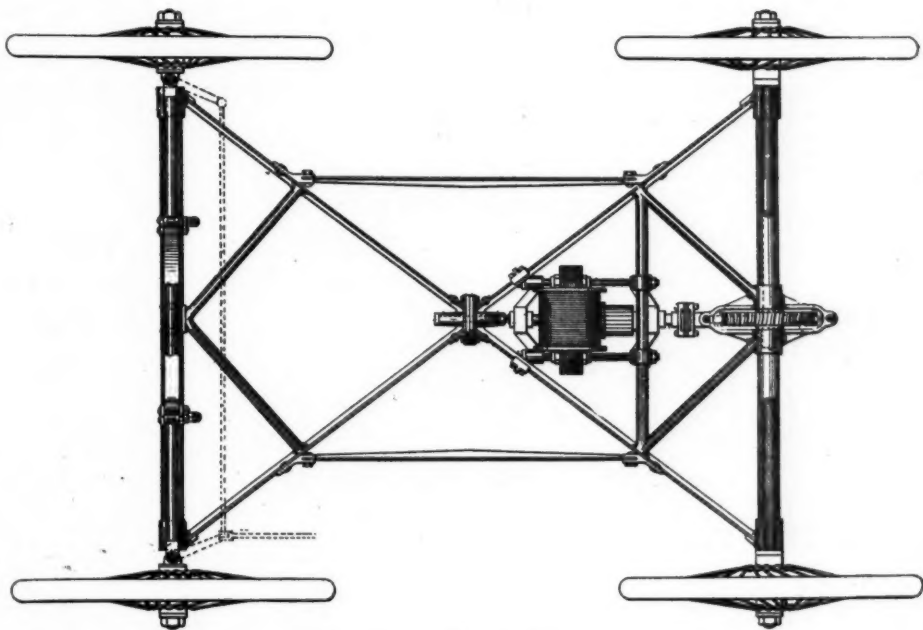
Elder's brake, shown in the accompa-



nying illustration, embodies more of novelty than practicability. A brake shoe, in the form of a segment of about a third the periphery of the wheel and shaped to set close to the tire of the wheel, is held in a sleeve by friction. Sleeve and shoe are normally held out of contact with the tire by a spring. When it is desired to stop the vehicle, a lever is pressed and the shoe comes in contact with the tire. The friction between the

tery Co., same place; motor-vehicle frame; nine claims allowed.

This patent is on the construction of an automobile frame. The method of construction is clearly shown in the illustration. The ends of the two traction wheel axles are provided with V-shaped frames, the apices of these two V-shaped frames meeting in a swivel joint in the center of the vehicle. The sides of the respective V-shaped frames are also con-



PERRET'S AUTOMOBILE FRAME.

shoe and tire is greater than that between the shoe and the sleeve, the shoe moves with the tire until it gets between the tire and the ground, as shown by the dotted lines, when, to quote from the patent specification, it "will quickly and nicely stop the vehicle." To start again it is necessary to back the vehicle till the friction returns the shoe to its normal position. How to overcome several obvious objections the inventor does not tell.

#### PERRET'S VEHICLE FRAME

Letters Patent No. 653877, dated July 17, 1900, to Frank A. Perret, New York City, assignor to the Perret Storage Bat-

tered by braces which are jointed as shown in the illustration. This construction and the manner of mounting the motor in connection therewith are covered in the nine claims.

#### TORBENSEN'S NOVEL CONSTRUCTION

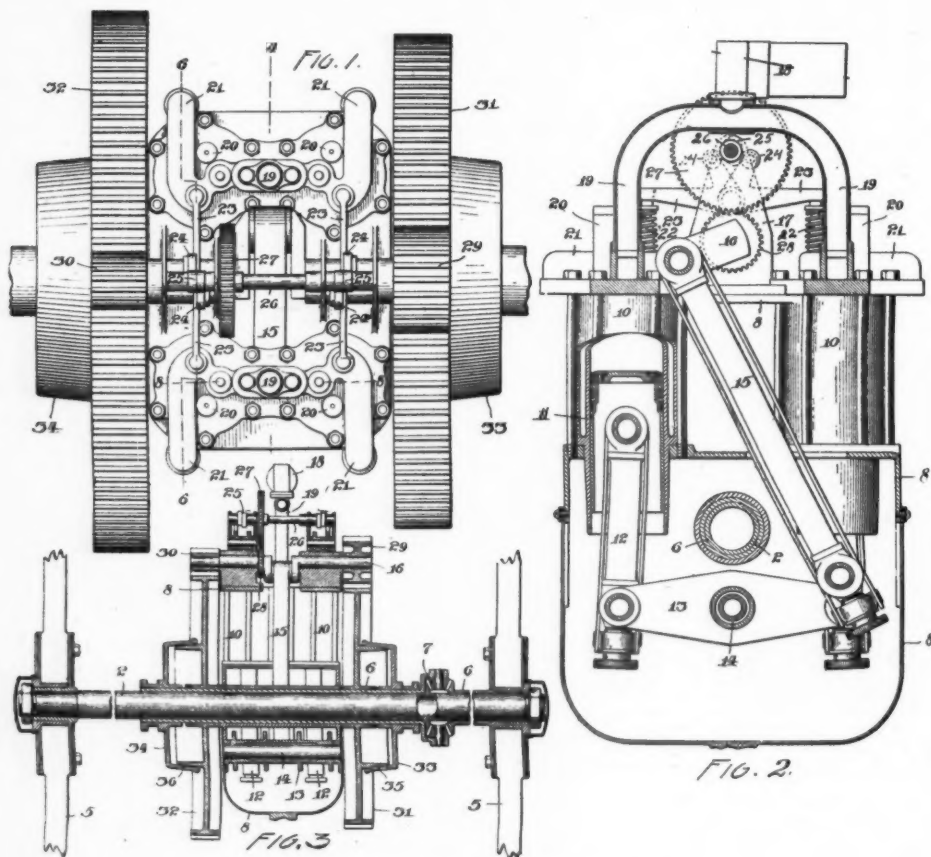
Letters Patent No. 653855, dated July 17, 1900, to Viggo V. Torbensen, Bloomfield, N. J., assignor to George T. Harris, Philadelphia, Pa.; four-cylinder gasoline engine and transmission gearing, in connection with an electric dynamo-motor and storage battery; eight claims allowed.

Torbensen has figured before in these columns as the inventor of ingenious devices in connection with motor-vehicle

## THE MOTOR AGE

construction. In the present patent he used a four-cylinder engine to avoid vibration, mounts the motor in the axle of the driven wheels and combines the motor and the transmission mechanism to secure compactness, and, finally, utilizes an electric dynamo-motor and a storage battery to start and to reinforce the power of the gasoline engine. In the illustrations Fig. 1 represents a plan view

of the engine are placed in front of the axle and two to the rear. The pistons 11 of the cylinders 10, 10, are connected by the piston-rods 12 to the rocking beam 13, which is mounted on a short shaft 14, which is supported by the motor frame 8. To one end of this rocking beam 13 is attached a rod 15, which, by means of a crank, actuates the shaft 16, carried in the supports 17.



TORBENSEN'S MOTOR AND TRANSMISSION MECHANISM.

of the gasoline engine and transmission gearing, Fig. 2 a transverse sectional view and Fig. 3 a longitudinal sectional view.

The two-piece axle 2 of the traction wheels 5 is surrounded by the bushings 6, 6, which are connected by the differential gear 7. The frame 8 of the motor is mounted on this axle and is prevented from turning by suitable braces.

As shown in Fig. 1, two of the cylin-

The carbureter 18 is connected, by the pipes 19, 19, to the admission valves. The ignition is effected by hot tubes 20, 20. The exhaust valves 21, 21, are controlled, with the aid of the springs 22, 22, and the crank-levers 23, 23, by the cam 25 of the shaft 26, which is provided with a gear wheel 27, which meshes with the gear wheel 28, with half the number of teeth of the wheel 27, which is actuated

by the shaft 16. The explosions in the four cylinders occur alternately.

On the end of the shaft 16 are the pinions 29 and 30, of different sizes, which mesh with the corresponding large gear wheels 31 and 32, which are both loosely mounted on the elongated bushing 6 on the axle wheels 31 and 32, which are both loosely mounted on the elongated bushing 6 on the axle 2. Splined on this bushing 6 are the clutch members 33 and 34, which can be made to engage the corresponding clutch members 35 and 36 on the large gear wheels 31 and 32, by means of which either the wheel 31 or

#### HALL'S AUTOMOBILE FRAME

Letters Patent No. 653801, dated July 17, 1900, to Robert F. Hall, **Moseley**, England; motor-vehicle frame and steering gear; five claims allowed.

In common with many other inventors, Hall prefers to drive all four wheels his vehicle, and he also prefers to steer by the aid of all four wheels.

He constructs his frame in two sections, each of which has the outlines of a parallelopiped. These two rectangular parts are held together by a swiveling joint. On each axle he mounts a differential gear, on the case of which is a

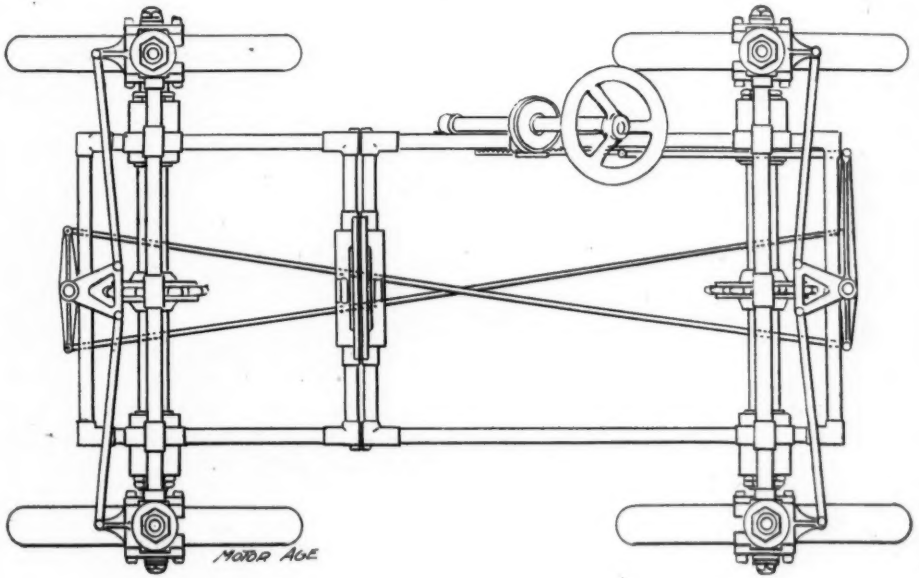


FIG. 1.—PLAN OF HALL'S STEERING MECHANISM.

the wheel 32 may be held fast to the bushing 6, to drive the traction wheels 5, 5. On the armature shaft of the electric dynamo-motor (not shown) is a pinion in mesh with the gear wheel 31. In this manner the electric machine is utilized either as a dynamo to charge the storage batteries or as a motor to start or to assist the gasoline engine when necessary, in a manner similar to that in other vehicles embodying this principle.

The patent embodies several meritorious ideas, but appears to be scarcely practical in the exact form shown in the patent office specifications.

sprocket wheel. These two sprocket wheels are connected by a chain. The swiveling joint provided for the flexibility of the frame, but no provision is made for maintaining the alignment of the sprocket wheels. Power is transmitted to the rear differential gear case by means of a pair of belts and tight and loose pulleys.

The wheels are carried in forks, as shown in Fig. 2. The driving axles are both provided with universal joints at either end. The forks are set in swivel joints at their upper ends, and the steering mechanism is attached thereto. A

plan view of this steering arrangement, whereby all four wheels are turned, is shown clearly in Fig. 1.

### EISENHUTH'S STEERING WHEEL

Letters Patent No. 654092, dated July 17, 1900, to John W. Eisenhuth, New York

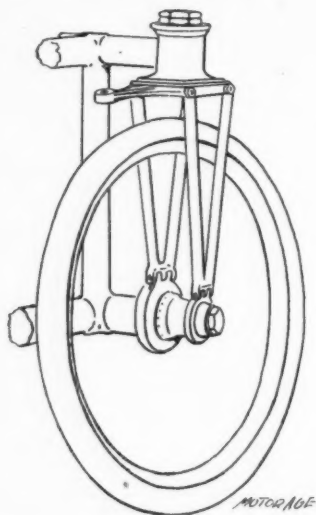


Fig. 2.—Fork and Wheel of Hall's Vehicle.

City, assignor by mesne assignments to Mamie G. Read, same place; nine claims allowed.

This is but one of a series of motor-vehicle patents secured by Eisenhuth, who styles himself the "banker inventor." Wheels of similar general construction as the one shown in Fig. 1 have

previously been described in these columns. Eisenhuth utilizes a non-revolving disc-like web for the center of his wheel and a revolving rim with anti-friction bearings, shown in Fig. 2, between the two. In the present invention

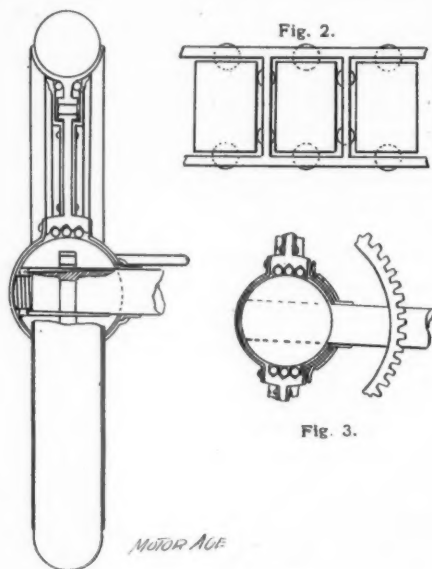


Fig. 1.

Eisenhuth's Steering Wheel.

he provides a spherical hub, around which the non-revolving central web is held so as to have lateral play to steer the vehicle. To the central web is attached a segmental rack, shown in Fig. 3, that is actuated by a pinion in connection with the steering mechanism.





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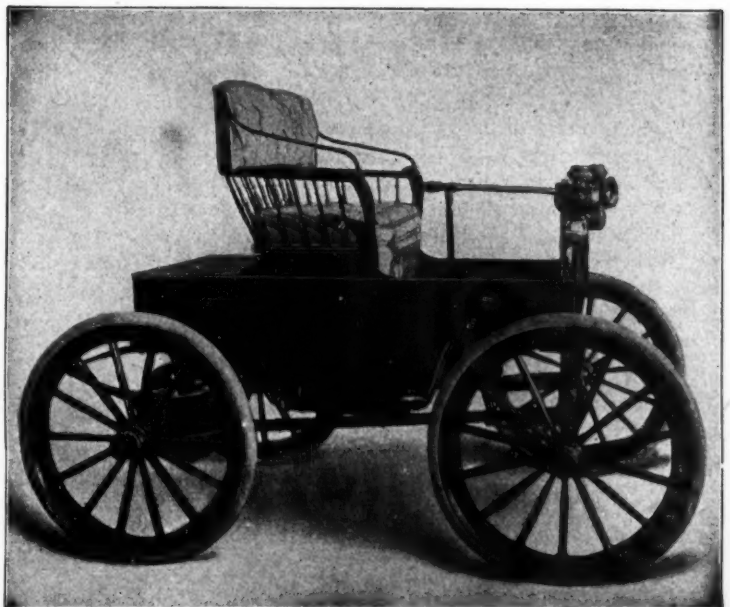
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## FROM THE FOUR WINDS

### A NEW AUTOMOBILE CLUB

New York, July 23.—Westchester, the home of many of New York's heavy swells, has a big automobile boom. On Saturday night, at the residence of Howard Willetts, White Plains, a number of automobilers met to form a club that will work in harmony with the Automobile Club of New York. One of the main objects of the members will be to provide supply stations along the Albany post road, the Boston post road and the new macadamized boulevards which are being built through the Bronx and Hudson River valleys, and the other cross country roads leading to the Ardsley Casino, Westchester County Club, and the Knollwood Country Club.

Most of the prospective members of the club are millionaires. The charter members are Paul G. Thebaud, Howard Willetts, Trenon L. Park, Oliver Harriman, Jr., Eugene Reynal, Nathaniel Reynal, William K. Vanderbilt, Jr., William E. Iselin and William Rockefeller, Jr.

### A RAILROAD MAN'S EXPERIENCE

A. J. Ingalls of Cleveland is assistant superintendent of the "Big Four" railroad, and in the past has made his frequent pilgrimages between Cleveland and Cincinnati over the rails of his road. Now he has changed tactics and finds his six-horsepower Winton motor carriage more than serviceable in covering this stretch of 283 miles between the two cities. On his last trip he left Cleveland in the evening at 7:20 o'clock and ran forty-five miles to Wellington by moonlight, arriving there at 10:35. Next day he got under way early in the morning and halted that evening at Springfield, a distance of 155 miles over the roads. During the day he made business halts at Mt. Gilead, Delaware, Cardington and Mechanicsburg. On the following morning about 8 o'clock he left Springfield and covered the remaining eighty-three miles on the Cin-

cinnati course by 4:30 p. m., stopping at the several towns enroute to show the station masters and railroad officials of the "Big Four" that there were other means of transit than the railroad. Mr. Ingalls does not go in for speed records on these trips. He says:

"Riding through the state on my Winton puts a new aspect on travel. It combines a marvelous degree of pleasure with business and makes life worth the living

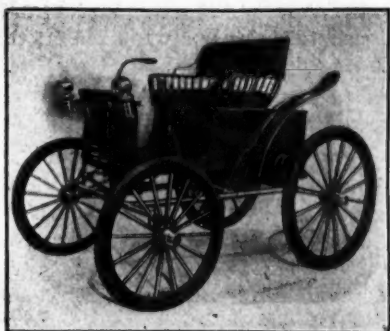
"They talk about ugly hills in Cincinnati, why I walked up Walnut hill and the other alleged ugly grades there on my high gear, never employing my 'hill climber' once, and mine is a six-horsepower Winton, which I have subjected to severe service during the past two seasons."

### LONG DISTANCE TRIAL

New York, July 23.—America is to have an automobile endurance test somewhat on the idea of the British 1,000-mile run. It is to be promoted by the Automobile Club of America and already a \$1,000 prize has been guaranteed by the members. The Motor Age is able to make the first announcement of the project, but the details of the test are yet only very general in idea.

It is proposed, according to the present plan, to make the endurance test one of 600 miles. That it shall be one purely of endurance, without regard to speed, it is proposed to award the prizes on the basis of stops made for any purpose whatever—repairs, recharging, taking on supplies, standstills on hills and taking and discharging passenger at rest. The route proposed Hudson, New York, and return for three consecutive days, a round trip of 200 miles each day. The time limit will be a low one, probably about ten miles an hour. President Chamberlin assures the Motor Age that the test is an assured fixture and only the details remain to be settled and the date in the autumn to be fixed for a com-

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pletion of the preliminaries. The competition will be limited to American made vehicles.

#### WILL OPEN A DETROIT TIRE DEPOT

E. H. Broadwell, one of the best known bicycle men of the middle states, formerly manager of the bicycle department of the E. C. Meacham Arms Co., of St. Louis, and who, for the past three years, has successfully managed the Detroit branch of H. A. Lozier & Co., will, on August 1, sever his connections with Cleveland wheels and assume the management of the western business of the Fisk Rubber Co., of Chicopee Falls, Mass., makers of Fisk tires for automobiles, carriages and bicycles, with head office at Detroit. This will be a distributing point for this well known tire, and particular attention will be paid to the carriage and automobile trade. The Detroit branch will be well equipped to take the best care of their customers, and under the management of Mr. Broadwell there can be no doubt as to its success.

#### VANDERBILT BREAKS RECORDS

Boston, July 23.—To Boston and back from Newport in less than four hours, actual running time, was made by W. K. Vanderbilt, Jr., in his imported Panhard racer, last Friday—the one that some weeks ago caused so much talk in Newport, and over which there was so much agitation. The distance between the two cities is sixty-nine miles by rail and some ten more by road, and it takes the steam cars two hours to make the trip. Accompanied by his imported chauffeur, Mr. Vanderbilt left Newport early in the morning and in less than two hours was in Boston. The roads are poor for quite a distance, but conditions seemed to cut but little figure. Between Newport and Fall River there are some very steep grades, but they were covered as easily as if on level ground. After lunch and the replenishing of the gasoline tanks at the headquarters of the Electric Vehicle Co. on Tremont Street, the return trip was made, and the time was about the same. He started from the Newport Reading Room

and on the return trip was applauded as he whizzed past. There was a high southeast wind, which helped him on the outward trip, but he had it in his face returning, and was obliged to wear his rubber mask.

During his stay in Boston Mr. Vanderbilt succeeded in getting himself arrested for fast driving and was fined \$15 the following day.

#### VANDERBILT AROUSES ENVY

New York, July 23.—William K. Vanderbilt, Jr.'s recent record breaking exploits on his racing Panhard between Newport and Boston have aroused great interest among the racing men of the Automobile Club of America, which may result in some big millionaire motor vehicle matches the coming autumn. Messrs. Bostwick and Bishop, both enthusiastic racing men, have purchased Panhards abroad, the former being the possessor of De Knyff's record breaker. Mr. Bostwick thinks he has the fastest thing on earth, has plenty of "sporting blood" and a few millions himself to burn.

J. Howard Johnson has bought two Mors vehicles, one of them of forty-horsepower seating eight people. Clarence G. Dinsmore has bought a Mors also.

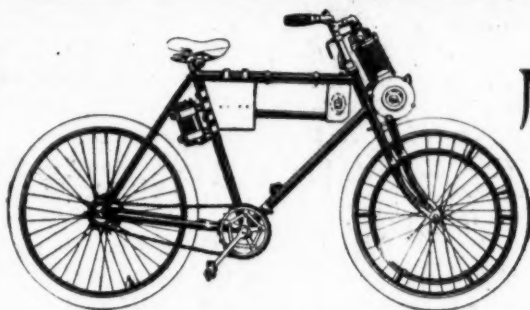
#### TURNING OUT MANY WINTONS

Intelligence from Cleveland is to the effect that the Winton Motor Carriage Co., owing to its recent increased facilities is turning carriages upon the market in greater quantities than ever before and can now guarantee delivery of both single and double seated carriages within thirty days from receipt of order. This company is at present engaged in broadening its field still more and hopes soon to be equipped so as to produce quantity sufficient to give immediate delivery.

#### MORE TESTS BY POSTAL AUTHORITIES

Washington, July 23.—During the past six months local postal officials have experimented with several automobiles in the effort to secure a machine that will meet all requirements of city mail col-





## Werner Motocyclette

Obtained  
Gold Medal and First Prize at  
Paris Exhibition.

We have no Agents in  
United States.

Our patents are valid and we are open for negotiations with any wealthy mechanical firm with view to forming a company in States and manufacture our machine for America.

Messrs. WERNER BROTHERS

40 Avenue de la Grande Armee, PARIS



## G & J TIRES

FOR AUTOMOBILES

are detachable, double tube tires. An occasional puncture is inevitable in any tire. Any one can repair a G & J Automobile Tire, easily and permanently.

**G & J TIRE CO.**

INDIANAPOLIS, IND.

What is **AUTOMOBILISM?**

All who are interested in that question should consult the

**"Motor-Car World"**

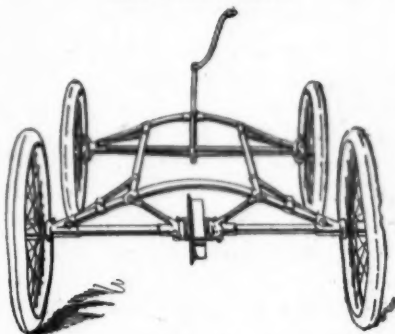
which each month reviews the progress of the new Locomotion throughout the World. Published at 87 Chancery Lane London, England. Annual Subscription, post free to the United States, 1 dollar.

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## WHY BOTHER

To Build RUNNING GEARS?

Save time, experiment, expense and trouble by  
buying ours complete.



They are ready for enameling and  
wheels and will take any carriage  
body with springs, motor, tanks, etc.

—WRITE US—

**MILWAUKEE AUTOMOBILE CO.,**

19th St. and St. Paul Avenue,

MILWAUKEE, WIS., U. S. A.

## Gasoline Engines!

OPPOSED CYLINDERS,  
BALANCED TYPE

Latest, Most Compact Design for Vehicles & Launches  
4 to 12 H. P. : Blue Prints, \$1.

**A. W. KING, 71 W. Jackson St., Chicago, Ill.**

Mail us your Subscription.



lection. An electric automobile has been thoroughly tested during the past week and the local postmaster is much encouraged by the work it accomplished. It is the intention to give it another week's trial, after which the postmaster will be able to decide positively whether he would recommend to the post office department the adoption of the vehicle for mail collections.

The American Autocarette Co., has just put in operation on the streets of this city a system of electric omnibuses. They are trolley car bodies mounted on automobile running gears, and are operated by storage batteries. In appearance they resemble small trolley cars, and are finished in the same manner. They are mounted on rubber tired-wheels and it is expected that in the course of time they will become rivals of the trolley cars.

#### HILL CLIMBING CONTESTS

At the fourteenth annual hill climbing contest of the famous Catford Cycling Club of England, an event for motor cycles was included in the program and thus a practical opportunity was had to judge of the respective merits of men and motors as hill climbers. The result was overwhelmingly in favor of the motors. The hill employed by the club offers a variety of grades, varying from one foot in  $8\frac{1}{2}$  to one foot in twenty-five. With a favoring wind the winning bicyclist, on a twenty-five-pound machine, geared to sixty-six and having  $6\frac{1}{2}$ -inch cranks, reached the top in 4 minutes and 14 seconds. The winning motor cycle, however, went up in 2 minutes and 58 seconds, and, oddly enough, the  $2\frac{1}{4}$ -horsepower motors beat out those having  $2\frac{3}{4}$ -horsepower.

#### RACES IN CONNECTICUT

New Haven, Conn., July 23.—An automobile exposition and tournament will be held at Brantford Driving Park, Brantford, Conn., on Wednesday and Thursday of this week. Each day the exposition will be open from two to ten o'clock and a grand parade at two o'clock will usher in the races at 2:30.

The program follows, and a very inter-

esting and comprehensive program it is, too:

Class A—Two wheeled vehicles. Distance five miles. Purse \$225, divided \$100, \$75, \$50. No limit to motor power.

Class B—Three wheel vehicles. Distance five miles, pursuit. Purse \$150, divided \$75, \$50, \$25. No limit to motor power.

Class C—Light vehicles of 500 pounds and under. To carry two people without pedal assistance. Purse \$150, divided \$75, \$50, \$25. No limit to motor power.

Class D—Heavy vehicles over 500 pounds, fully equipped, to carry two or more persons. Distance five miles, pursuit. First prize diamond studded gold medal, value \$100; second prize die gold medal, value \$60; third prize gold medal, value \$40.

Class E—Obstacle race, to determine manageability and tractability of vehicles. Distance 100 yards. Prize gold die medal, value \$50.

Class F—Hill climbing, open to all vehicles without pedal assistance. Distance 125 feet. Three trials for each vehicle. Prize gold die medal, value \$50.

Class G—Brake test, open to all vehicles, to determine brake efficiency. Distance 100 yards. Prize gold die medal, value \$50.

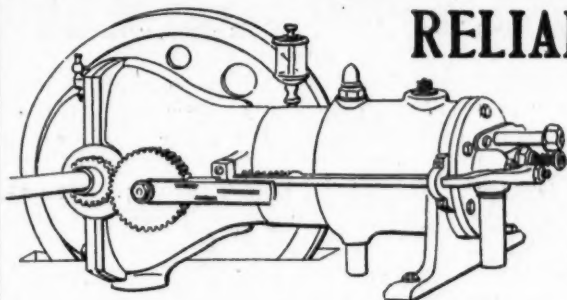
Class H—Championship. Ten-mile handicap. Open only to first and second winners of all classes except A, E, F, and G. Prize, diamond solid gold emblematic medal.

Class I—Appearance contest for best appearance in each class during parade. Prize, silver cups.

#### NOTES FROM PHILADELPHIA

Philadelphia, July 23.—Automobiles are becoming more and more plentiful here with each succeeding week. This can readily be explained by quoting a local dealer's statement to the effect that during last week alone he delivered no less than ten vehicles to their owners, all of whom are Philadelphians. He further stated that he is still far behind in his deliveries.

The Lafayette Hotel and several of the larger department stores having already enlisted the automobile in their respect-



## RELIABLE MOTORS

FOR AUTOMOBILES

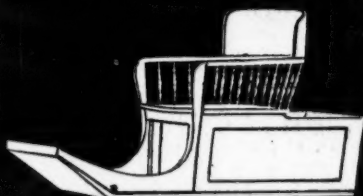
Working parts enclosed.  
One oil cup for all bearings.  
Perfect ignition.  
Cheap running cost.

We also make transmission and running gears.

St. Louis Gasoline Motor Co., - 822-824 Clark Ave., St. Louis, Mo.

### BODIES FOR MOTOR VEHICLES

A SPECIALTY



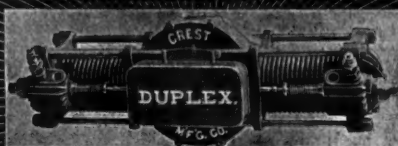
Fine Carriage Work and Ironed Gears. Built-Up Woodwork.

CONVENIENCE SOLICITED.

CINCINNATI PANEL COMPANY

CINCINNATI, OHIO.

### CREST MANUFACTURING CO. — CAMBRIDGEPORT, MASS. —



CREST GASOLINE MOTORS  
FOR  
TRICYCLES AND  
AUTOMOBILES.

The **LIGHTEST** and **CHEAPEST** Motor Per  
Horse-Power Made in the World.

## CASTINGS

ALUMINUM  
BRASS  
BRONZE

— ALSO —

### SOFT TOUGH GREY IRON

Just the thing for Automobile  
Parts. We are in position to  
make prompt shipments. . . .

VAN WAGONER & WILLIAMS  
HDW. CO.

CLEVELAND, OHIO

IF YOUR AUTOMOBILE IS TO BE SHOD WITH  
PNEUMATICS

# GOODYEAR TIRES

WILL FILL THE BILL BEST.

GOODYEAR TIRE & RUBBER CO.

AKRON, OHIO

ive services, other local caravansaries and "mill-end" emporiums are preparing to swing into line. A certain large hotel has already placed an order for six passenger busses to run to and from the various railroad stations in the city, and an order of twice that number of delivery wagons has just been given by a large department store.

The Automobile Club of Philadelphia last week inaugurated a series of "motor teas," which will continue throughout the season. The members assemble at the Union League in the afternoon, and after a pleasant "drive" sit down to sup at one of the rural or Park hosteleries. Last week's outing was to Belmont Mansion.

Weise Hammer, the local writer and racer, who is "doing" the Paris Exposition, thus records, in one of his letters to the local Item, an incident he witnessed on one of Paris' boulevards: "The automobile was running, as all of them do here," he says, "at a very high rate of speed, knocked a man down, hurting him seriously. The 'chauffeur' tried to escape by throwing open the throttle to its widest, but the mob would have none of it. The machine was stopped, and while some of the crowd paid compliments to the driver and the owner of the rig, the balance slashed the tires to ribbons, tore the cushions to shreds, detached the gasoline tank and poured the contents over the outfit, and finally wound up by putting a match to the wreck. Then they proposed to 'lynch' the two men and were proceeding to carry out this pleasant part of the programme, when the little celebration was stopped by the very opportune arrival of the police."

#### LOCOMOBILE NEWPORT BRANCH

The Locomobile Co. of America has just opened extensive and finely equipped headquarters at No. 110 Bellevue Avenue, Newport, to take advantage of the motor-vehicle craze now raging at fashion's summer capital. E. S. Jaffray, Mr. Peekham and other representatives of the company are in charge.

Buffalo is going to follow the worthy example of Columbus, Ohio, and Hart-

ford, Conn., and is about to install an automobile patrol wagon.

The Standard Automatic Gas Co., at present located at Oil City, Pa., has purchased a site at Youngstown and will erect a large factory. The plant will be in operation this fall.

It is learned from a reliable inside source that Chicago city officials are making preparations to install a number of automobiles in the municipal service. City Electrician Ellicott, the head of the automobile licensing board, is investigating the subject, preparatory to placing the order.

### MISCELLANEOUS

Advertisements under this head 5 cents per word, cash with order. Express orders, post office orders, or postage stamps accepted.

#### FOR SALE

**FOR SALE**—An improved No. 2 Locomobile steam carriage, first-class order; can give immediate delivery; price \$550.00. Address EDWIN KILBURN, Spring Valley, Fillmore Co., Minn.

**FOR SALE**—150 H. P. Erie Engine in first-class condition, with automatic cut-off, used about one year. Also one large solid iron pulley, 6 ft 9 in. diameter, 6 in. hole, 12 in. crown face & yway, 13-16 in. wide, 3/4 in. deep, hub 10 in. diameter. Address THE STANDARD TOOL COMPANY, Cleveland, O.

**FOR SALE**—Cheap. Gasoline carriage, speed 18 m.p.h. Also one hydro-carbon motor. SMITH BROTHERS, Webster City, Ia.

**FOR SALE**—Owner buying four-passenger Winton, will sell for \$975 his new 1900 Standard two-passenger Winton Phaeton; latest model, perfect order; superior engine; is very fast; has been used four weeks; can be seen in New York and fully tested by purchaser. Address R. E. M., care Motor Age.

**FOR SALE**—Winner Runabout, fitted with 3 h. p. engine; good running order. Price \$375.00. L. C. W., 1721 Sassafras St., Erie, Pa.

**FOR SALE**—An invention of great value to motor vehicle and bicycle frame manufacturers. Effects large saving in expense, increases strength and improves appearance. Patents applied for. Address in first instance, FRAME, care Motor Age, Monon Building, Chicago.

#### WANTED

**WANTED**, to purchase, second-hand gasoline vehicle, in good condition to carry two persons. State make and price to P. O. Box 849 St. Charles, Ill.

### STEERING HANDLES FOR AUTOMOBILES.

SEND BLUE PRINTS WITH SPECIFICATIONS.

**CHICAGO HANDLE BAR CO., Chicago, Ills.**

## SPECIAL MACHINE WORK FOR AUTOMOBILES

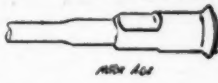
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STEERING HANDLES

Send us your blue prints for estimates.

THE KIRK MFG. CO., Toledo, Ohio

## SPOKES

We manufacture Spokes  
for Automobiles.EXCELSIOR NEEDLE CO., Torrington, Conn.  
WESTERN OFFICE, 40 DEARBORN ST., CHICAGO

## WE MANUFACTURE SPROCKET WHEELS

in all sizes and  
thickness, for any  
pitch chain;  
also miscellaneous  
parts forBicycles and  
Automobiles

PETER FORG, - SOMERVILLE, MASS.

## ATLANTIC TUBE CO.

WELDLESS  
STEEL  
TUBING—FOR—  
AUTOMOBILES

CHICAGO

PITTSBURGH

NEW YORK

## For Motor Vehicles

Dixon's Pure Flake Graphite Lubri-  
cants for Engine Cylinders, Chains,  
Gears, Bearings, etc. Nothing can  
equal them.JOSEPH DIXON CRUCIBLE COMPANY  
JERSEY CITY, N. J.

## VARIABLE SPEED TRANSMISSION

For the  
simplest and best  
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EMPIRE MOTOR WORKS

300 Washington St., Buffalo, N. Y.

We are prepared to make  
all kinds of

## SCREW MACHINE WORK

FOR

AUTOMOBILES

AND

MOTOR  
BICYCLES

REED &amp; CURTIS MACHINE SCREW CO.

WORCESTER, MASS.

## MACHINE WORK

For Automobile Builders

Any kind of special work to order. Automatic Screw  
Machine jobs a specialty.

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MILWAUKEE, WIS.



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—FOR—  
AUTOMOBILES

CAN FURNISH ALL SIZES

The GRANT BALL CO., Cleveland, O.

## AUTOMOBILE WOOD RIMS!

28-inch to 36-inch for 2 inch to 4-inch Tires

FAIRBANKS-BOSTON RIM CO., Bradford, Pa.

## Malleable Castings

High  
Tensile  
StrengthWill Not  
Harden in  
Brazing...

## Bike Steel Castings

### ACME STEEL CASTINGS

Will Temper Like Tool Steel.

ACME STEEL &amp; MALLEABLE IRON WORKS, Buffalo, N. Y.

ENGINES, Boilers, Regulators,  
Burners, Gauges and Valves.  
Also a full line of Steam Ve-  
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LOCK REGULATOR CO., - Salem, Mass.

—AND FOR CATALOG—

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C. COLES DUSENBURY & SON, Agents, 396-398 BROADWAY, cor. Walker St., NEW YORK  
—AGENTS FOR CLOTH AND SILK MILLS—

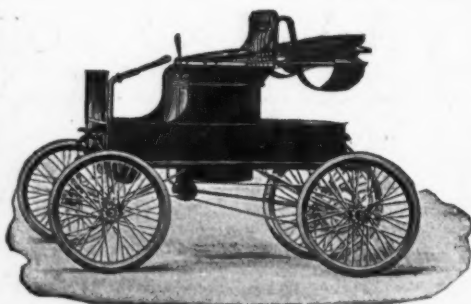


Greatest Hill Climbers ever produced as shown by tests in the Alleghany Mountains.

# Baldwin

(Steam) **Automobile**

NO VISIBLE  
EXHAUST



PERFECT  
INDESTRUCTIBLE  
BURNER

**BALDWIN  
AUTOMOBILE  
MFG. CO.**

CONNELLSVILLE, PENNA.

DE DION-BOUTON  
*"Motorette"*  
COMPANY.

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Motorcycles : : : : Motorettes

Sole Agents and Licensed Manufacturers in the United States of America

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FRANCE

The BEST, LIGHTEST and MOST RELIABLE GASOLINE MOTOR for AUTOMOBILE WORK.

AUTOMOBILE and CARRIAGE MANUFACTURERS supplied with MOTORS at special prices.

OVER 20,000 DE DION MOTORS in ACTUAL USE on MOTORCYCLES and MOTORETTES.

Not an EXPERIMENT, but a TRIED and PROVED SUCCESS. : : : : : : : :

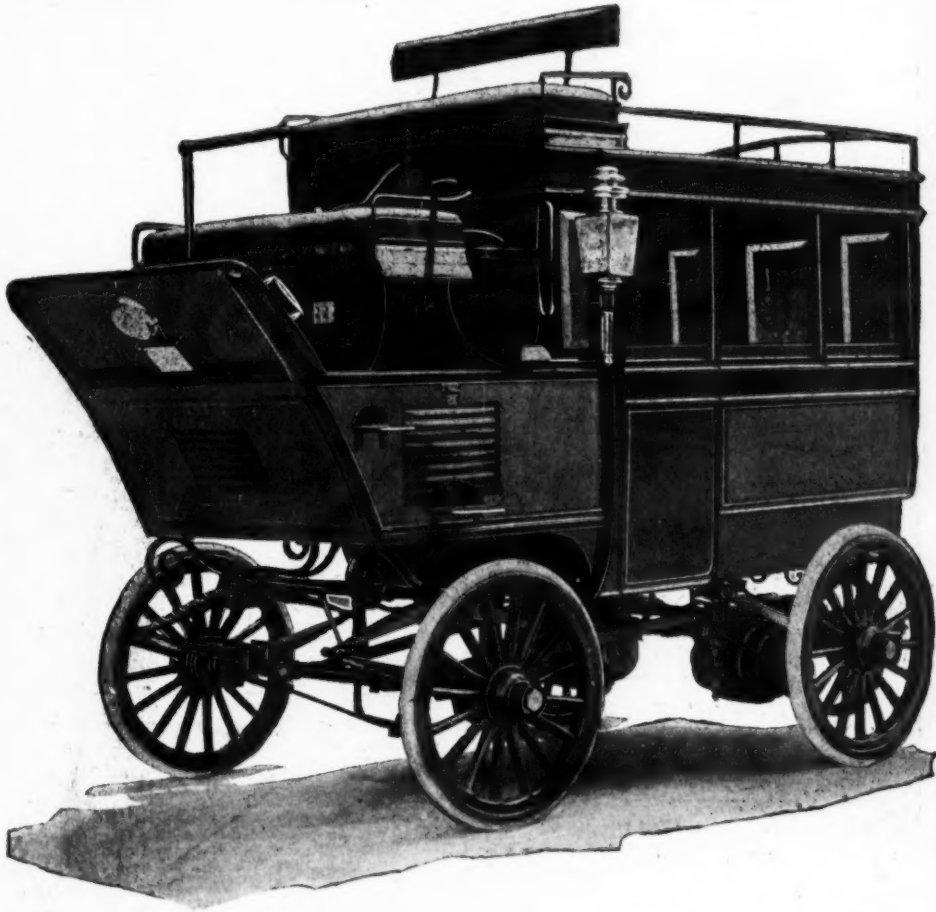
General Offices and Factory: Church Lane and 37th St.  
**BROOKLYN, N. Y.**

Can be reached by 29th Street Ferry from the Battery, New York, via 39th Street car, which passes factory and offices;  
Or by Fifth Avenue Elevated from Brooklyn Bridge, via Coney Island surface cars from 36th Street, which also pass the factory and offices.



THE MOTOR AGE

# PERFECTLY NOISELESS



This omnibus is equipped with two  $4\frac{1}{2}$  H. P. Motors which will stand an overload of 100 per cent. Battery capacity, 19 K. W.

We also build DELIVERY WAGONS, STANHOPES and BRAKES and guarantee them—something no other company does.

All our vehicles have *Flexible Running Gears and Spring Hung Motors*, are built with the least possible number of parts and have little to get out of order. Every precaution has been taken to prevent the burning out of motors or the injury of batteries from carelessness.

—THEY ARE AS NEAR FOOL PROOF AS POSSIBLE—

## HEWITT-LINDSTROM MOTOR Co

75 North Clinton St., CHICAGO, U. S. A.

JOHN HEWITT, President and Treasurer.

CHARLES A. LINDSTROM, Secretary and Gen'l Manager

WASHINGTON PARK CLUB GROUNDS.....CHICAGO

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Every Reputable Manufacturer of Motor Vehicles in the World will be represented,  
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## EXCITING RACES

In contests of from one to one  
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## NOVELTY RACES

Will be numerous and highly  
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## Hill Climbing and Rough Road Contests

Will be excitingly interesting.

Exhibitions of Fancy and

## TRICK DRIVING

By Expert Operators.

## TESTS OF UTILITY

Will be made with vehicles of all  
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## Passenger Exchange

With vehicles running at a high  
rate of speed.

**\$10,000 in Cash Prizes and Trophies**

WILL BE AWARDED IN VARIOUS CONTESTS.

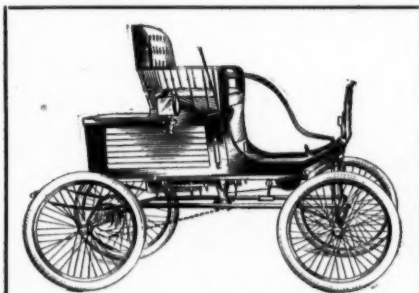
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## The "Locomobile" Company of America

are now turning out in large quantities, a new and improved "Locomobile." The improvements are as follows:



Style No. 2—\$750. F. O. B. Bridgeport, Conn.

IMMEDIATE DELIVERY Style No. 2 and Style No. 3 after AUGUST 15th.

50 per cent. increase in the water supply.  
Auxiliary hand water pump.  
Larger and heavier fuel tank.  
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Wider seat. Wider body. Wider tread.  
Auxiliary throttle valve and locking device.  
Improved and heavier engine.  
Water Column and Gauge Cocks.  
Cross-draught. The fire cannot burn back or blow out.  
Side steering lever.  
Self-feeding oil cup for the cylinders.

—ADDRESS ALL INQUIRIES TO—

## THE "Locomobile" COMPANY OF AMERICA

11 Broadway, NEW YORK

BRANCHES—70th St. and Broadway, N. Y.; 7 E. 39th St., N. Y.; 97-99 Greenwich St., N. Y.; Arcade, 71 Broadway, N. Y.; 110 Bellevue Ave., Newport, R. I.; 249-251 N. Broad St., Philadelphia, Pa.; 1026 Connecticut Ave., Washington, D. C.

FOREIGN REPRESENTATIVES—American Automobile and Motor Co., Ltd., 19 Rue Duret, Paris; E. J. Halsey, 62 Sussex Pl., So. Kensington, London.

## Elmore Motor Carriages!



SIMPLEST AND BEST DESIGNED GASOLINE LIGHT MOTOR CARRIAGE.

THEY ARE ALWAYS READY TO GO

ELMORE MFG. CO. - Clyde, Ohio

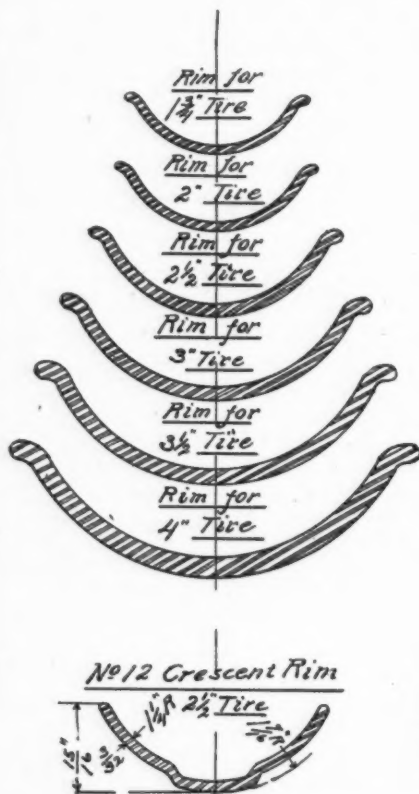
**EVERYTHING IN  
SPRING STEEL**

# RIMS

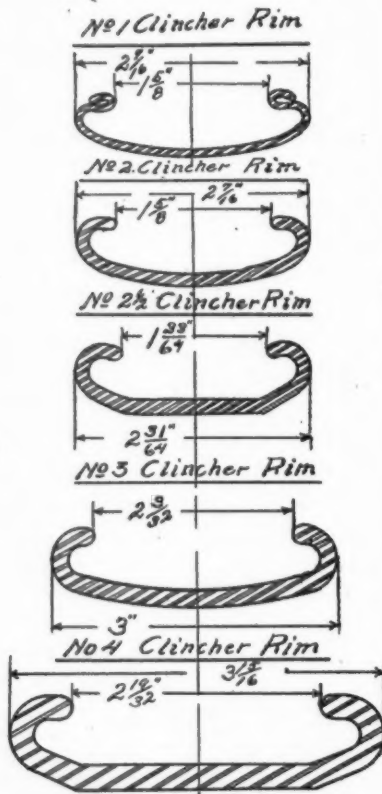
**FOR SINGLE TUBE  
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**EXTRA STRONG and TRUE with SPOKE HOLES DRILLED and COUNTERBORED to SUIT**  
Cut shows in half size a few of our sections.

*Crescent Rims*



*Clincher Rims*



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**"Brass-Lined," Anti-Rust, Safety "Clincher" Tubing**  
FOR AUTOMOBILE MAKERS.

All sizes and cut to lengths furnished in sets to order.

**THE WILMOT & HOBBS MFG. CO.**

Hot and Cold Rolled Steel Mills and Factories and Main Office at BRIDGEPORT, CONN.

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